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ORIGINAL ARTICLE

The good character at work: an initial study on the contribution of character strengths in identifying healthy and unhealthy work-related behavior and experience patterns

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Abstract
Purpose *Positive psychological functioning* has been related to various positive work-related outcome variables, such as job satisfaction or work engagement. The aim of the present study was to examine the relations between morally positively valued traits (i.e., strengths of character) and work-related behaviors.
Method A sample of 887 adult women completed the *Values in Action Inventory of Strengths* (VIA-IS) and the *Work-related Behavior and Experience Patterns Questionnaire* (AVEM) in an online survey.
Results Those assigned to healthy work-related behavior and experience patterns differed in their strengths profiles from those that demonstrated unhealthy patterns (i.e., burnout type) in a predictable way. Especially the strengths of zest, persistence, hope, and curiosity seemed to play a key role in healthy and ambitious work behavior.
Conclusions The study underlines the relevance of character strengths in work settings and suggests that interventions based on character strengths could substantiate interventions already existing at the workplace in order to enhance positive work outcomes further (e.g., work satisfaction, engagement).

Keywords Burnout · Character strengths · Positive psychology · Work-related behavior and experience

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Character matters at work: the contribution of character strengths in identifying healthy and unhealthy work-related behavior and experience patterns

Positive Psychology is the scientific exploration of what is best in people and of indicators that allow for flourishing (Seligman and Csikszentmihalyi 2000). In this study, positive psychological functioning is examined in relation to healthy and unhealthy work-related behavior and experience patterns. Peterson and Seligman (2004) revived psychology's abandoned interest in research in morally positively valued traits (i.e., the "good character") and developed a classification of twenty-four character strengths (the *Values in Action classification*, VIA). They postulate that living in accordance to one's strengths is beneficial for one's well-being. There is empirical evidence for positive relations between strengths and various indicators of life satisfaction from studies with different cultures, age groups, and assessment methods (Khumalo et al. 2008; Park and Peterson 2006a, b; Park et al. 2004; Peterson et al. 2007; Ruch et al. 2010a, b). Most of these studies have been conducted with the *Values in Action Inventory of Strengths* (VIA-IS; Peterson et al. 2005) that allows for the subjective assessment of the twenty-four strengths. According to Peterson and Seligman (2004) and Ruch et al. (2010a, b), five second-order factors can be identified in the VIA-IS, that is, emotional (e.g., zest, hope), interpersonal (e.g., kindness, leadership), intellectual (e.g., curiosity, creativity), and theological strengths (e.g., gratitude, religiousness), as well as strengths of restraint (e.g., persistence, self-regulation).

Character strengths are seen as trait-like and therefore, stable over time. A recent study has shown a similar genetic contribution to most of the character strengths as for other

personality traits (Steger et al. 2007). However, Peterson and Seligman (2004) argue that they are also malleable under certain enabling conditions such as sustained practice (Peterson and Park 2004; Peterson and Seligman 2004). For example, it has been shown that strength-based interventions (i.e., systematically practicing and cultivating a strength for a given period of time) are effective in increasing well-being and reducing depression (Seligman et al. 2005; Mitchell et al. 2009).

The character at work

Positive psychological functioning and positive resources (e.g., flow, gainful employment, hope, optimism, resilience, character strengths) were shown to have a beneficial impact on work-related aspects such as job satisfaction (see, e.g., Hakanen et al. 2008; Hodges and Clifton 2004; Snyder and Lopez 2007; Vansteenkiste et al. 2007; Youssef and Luthans 2007). Also, the interest in positive organizational behavior has risen (e.g., Luthans and Avolio 2009). Peterson and Park (2006) summarize findings with the VIA-IS in the work context and state that the correlations of the scale with life- and work satisfaction across various occupational types converged well. Typically, it is the same strengths that yield the numerically highest (i.e., curiosity, gratitude, hope, love, and zest) and lowest (e.g., modesty, love of learning) correlation coefficients with life- and work satisfaction. In a study with cadets in the US Military, the strength of hope predicted adherence to the service, whereas love predicted accomplishments as a leader. Students who possess the strengths of persistence, prudence and love earn better grades, even when controlled for ability (see Peterson and Park 2006; Matthews et al. 2006). Two recent studies on character strengths at work found that curiosity, zest, hope, gratitude, and religiousness were associated with work satisfaction across different occupations (Peterson et al. 2010) and that zest was associated with both greater life- and work satisfaction (Peterson et al. 2009). Overall, it has been shown that character matters in work life. It is therefore expected that, at a general level, greater expression of character strengths relates to positive work attitudes and positive work-related behavior and experience patterns.

Apart from the reported findings for character strengths and different aspects of well-being, there is further empirical evidence that strengths relate to components of mental and physical health (e.g., optimism, Carver et al. 2009; gratitude, Emmons and McCullough 2003; curiosity, Richman et al. 2005). They act as a buffer against the effects of stress or trauma (Park 2004). At a theoretical level, strengths in the VIA-classification are psychologically fulfilling in the sense of enabling a person to flourish (i.e., strengths facilitate optimal functioning). Living in accordance to ones signature strengths (i.e., three to seven strengths that are indicative for a person) is associated with positive consequences (e.g., flow-experiences; Peterson and Seligman 2004). Furthermore, using and cultivating (signature) strengths facilitates the experience of positive emotions. These, in turn, are related with broadening the current action-thought repertoire and building of personal resources for better coping with daily stressors (see Fredrickson 2004). It can be assumed that some of these relations between strengths and health are mediated by the use of positive coping behaviors, which might be used in order to manage the requirements of one's work-related tasks.

Assessing work-related behavior and experience

The *Work-related Behavior and Experience Patterns Questionnaire* (AVEM, orig. "Arbeitsbezogene Verhaltens- und Erlebensmuster" Schaarschmidt and Fischer 1997, 2008; see also Bauer et al. 2006) was developed for testing commitment at work, resistance toward stress, and work-related emotions. It consists of eleven scales that reflect different attitudes toward work (e.g., *career ambition*, *striving for perfection, satisfaction with work,* etc.). The analysis can either be based on single scales (for an overview of healthy and unhealthy aspects of work-related behavior) or on four distinct patterns of work-related attitudes and coping behaviors; namely, the "*healthy-ambitious*" type (G; "*Good health*"); the "*unambitious*" type (S; "*attitude of Sparing investment at work*"): the "*excessively ambitious*" type (Risk Pattern A; "*Ambitious*"); and the "*resigned*" type (Risk Pattern B; "*Burnout"*). Additionally, there are mixed-types that cannot be clearly assigned to any of these. The AVEM has been widely used in research and is applicable in various work settings. For example, it was used to study the relations between working behaviors and psychological and psychosomatic symptoms (Bauer et al. 2006), to track changes in students' working behavior over time (Voltmer et al. 2010b) or to compare behavior and experience patterns of different occupational types (Voltmer et al. 2011). Voltmer et al. (2010a) studied the working behaviors of pastors from two different evangelical denominations. They found a difference between the healthier types G and S and the risk pattern B in the dimensions of *daily spiritual experience* (e.g., "to sense the presence of god") and *positive religious coping* (e.g., "to find strength and support in god"), with higher expressions for the healthier types.

When testing for relations between character strengths and work-related behavior and experience, a specific pattern is expected. Primarily, people assigned to types G and S should score higher in most of the character strengths than those assigned to the negatively connoted, unhealthy working types (Risk Patterns A and B), as expressing

character strengths should, by definition, be a path to well-being (Peterson and Seligman 2004). It is expected that the AVEM scales on work- and life-satisfaction replicate what has been found in earlier studies, that is, numerically highest correlations for curiosity (intellectual), gratitude (theological), hope, love, and zest (all emotional strengths). Furthermore, the strengths of hope and zest are expected to correlate robustly with *active coping* (a representative item is: "I'm convinced that I will be able to handle upcoming challenges") and *resignative tendencies* ("If I'm not successful, I resign quickly"; Schaarschmidt and Fischer 2008).

Further hypotheses on the relationship between the VIA-IS and the AVEM can be drawn from the characterization of the types of work-related behavior and experience patterns as given by Schaarschmidt and Fischer (2008). The healthy-ambitious type (G) is described as ambitious, perfectionist, actively coping, experiencing social support, being able to keep emotional distance from work, and to be satisfied with work and life in general. Therefore, it is expected that the expression of zest in type G will exceed all other types. Concerning the expression of persistence (strength of restraint), type G will exceed types S (unambitious) and risk pattern B (resigned), but not risk pattern A (excessively-ambitious). According to its definition, the unambitious type (S) does not share the ambitious or perfectionist attitude with type G, but nevertheless is also composed of being able to keep distance from work, experiencing social support, and being satisfied with life. *Experiencing social support* (AVEM) seems to be closely related to the strength of love, which should therefore be higher in the types G and S than in the negatively connoted types. Furthermore, it is expected that people, who belong to the types G and S score higher in the theological strength of religiousness (see Voltmer et al. 2010a) than those who belong to the resigned type. People with a typical risk pattern A behavior are ambitious and perfectionist and hence are expected to show higher expressions of persistence and prudence (both strengths of restraint). Summarizing these hypotheses, one may conclude that strengths assigned to all five broader strengths factors demonstrate robust relations with work-related behaviors. Therefore, this study allows testing the relations of the "good character" with work-related behavior at a broad level accounting for the plural nature of the character.

The main aim of this study was twofold: (1) The correlations of the VIA-IS with the AVEM were examined as a first indicator of the contribution of single strengths to signs of adaptive and maladaptive work-related behavior and experience and (2) Differences in the expression of strengths among people with healthy (types G and S) versus unhealthy (risk patterns A, and B) work-related behavior and experience patterns were tested.

Method

Procedure and participants

All participants completed the AVEM and the VIA-IS online. They registered on a website offering different services related to positive psychology (e.g., online testing, intervention programs, etc.). Only participants who were currently employed entered this study. The sample was mainly recruited through an article in a women's magazine as part of a special topic on resilience. Those who indicated intake of psychotropic drugs or undergoing psychotherapy at the moment were excluded from participation. Completion of the questionnaires was free of charge, and participants were eligible to a feedback on their results. Data collection via the Internet allowed for the minimization (and standardization) of the interactions between participants and investigators. Although, online testing has been criticized for possible biases of the collected samples, there is empirical evidence that data collected via the Internet is comparable to data collected in more conventional ways (e.g., Gosling et al. 2004). Data collection was designed and conducted in accordance with the guidelines for "good practice" in Internet testing (Coyne and Bartram 2006).

The sample consisted of 887 adult women aged 19–67 ($M = 43.28$; $SD = 8.55$). The largest group was married (43.5%), 16.6% were not married but lived together with a partner, 10.7% were in partnership but did not live together with the partner, 17.4% were single, 10.5% were divorced or lived in separation, and 1.4% were widowed. The sample was rather well educated: the largest group held a university degree (42.6%), 20.4% had a degree from a university of applied sciences, 16.9% had a school diploma allowing them to attend university, 19.5% had a completed vocational training, and 0.6% had elementary school education.

Instruments

The *Values in Action Inventory of Strengths* (VIA-IS; Peterson et al. 2005; German adaption by Ruch et al. 2010a, b) is a 240-item questionnaire for the subjective assessment of 24 character strengths. All items are positively keyed and use a 5-point Likert-style answer format (from 1 = "very much unlike me" through 5 = "very much like me"). A sample item is "I never quit a task before it is done" (persistence). Ruch et al. (2010a, b) reported good internal consistencies, stabilities, a robust factor structure as well as data on the convergent validity for the German form, which has already been used in several earlier studies (e.g., Proyer and Ruch 2009; Ruch et al. 2010a, b; in older but highly comparable versions in Peterson et al. 2007 and Ruch et al. 2007). The VIA-IS has also been used in a wide range of different contexts, for example, in comparisons with the

"strengths profile" of different US states or cross-cultural differences (Park and Peterson 2010; Park et al. 2006; Linley et al. 2007); to study the change in character strengths and its contribution in recovery following trauma (Peterson and Seligman 2003; Peterson et al. 2008), or to assess genetic and environmental influences on character strengths (Steger et al. 2007). In the present study, all scales yielded satisfactory internal consistencies (*median* = 0.77, from $\alpha = 0.63$ [kindness] to $\alpha = 0.89$ [creativity]).

The *Work-related Behavior and Experience Patterns Questionnaire* (AVEM; Schaarschmidt and Fischer 1997, 2008) consists of 66 items for the subjective assessment of eleven dimensions of work-related stress and coping experiences and behaviors (6 items per dimension). The AVEM uses a 5-point Likert-style answer format (from 1 = "does not apply at all" through 5 = "applies completely"). A sample item is "To me, work is the most important life purpose" (subjective significance of work). Additionally, the AVEM allows for the distinction among four types of work-related behavior and experience patterns (empirically derived via a cluster analysis; Schaarschmidt and Fischer 2001). These work-related types are of more diagnostic and practical relevance than the single scales: Although, an increased expression in a scale (e.g., commitment) is not unhealthy *per se*, a combination with other factors (e.g., lack of emotional distance and social support) may indicate unhealthy working experience or behavior, which thereby leads to a more detailed reflection (Schaarschmidt et al. 2006). Therefore, most of the research conducted with the AVEM has its emphasis on the types rather than the single scales. The AVEM has been chosen because it offers the possibility of assessing negative *and* positive patterns of work-related behavior and experience. It was of special interest to investigate how the positively valued character strengths relate to positive types of work-related behavior and experience. Whereas the healthy-ambitious and the unambitious type show a healthy attitude toward work, in general (despite the latter's lack of motivation), the excessively ambitious and the resigned types relate to negative outcomes such as mental and physical problems. The excessively ambitious type (Risk Pattern A) is related to the cardiovascular disease-prone type-A behavior, whereas the resigned type (Risk Pattern B) is associated with burnout-experiences. The presence of the risk pattern B in the AVEM is, of course, not sufficient for the "diagnosis" of a burnout syndrome. However, it can be considered as being indicative for typical work-related behaviors and experiences that are common in those suffering from burnout syndrome. (Schaarschmidt and Fischer 2001). As this is the first study to examine the character strengths' relation to the AVEM, both the single scales but as well as the four additional categories were analyzed. Across several studies, the AVEM was reliable (internally consistent, stable) and yielded a robust factor structure. Schaarschmidt and Fischer (1997, 2008) present extensive information on its convergent and divergent validity. In the present study, all scales yielded high internal consistencies (*median* = 0.86, from $\alpha = 0.84$ [experience of social support] to $\alpha = 0.92$ [emotional distancing]).

Results

All scales were normally distributed. Although all AVEM scales and some of the VIA-IS scales were correlated with age and/or educational level, they existed widely independently from the age or education; none of the correlation coefficients exceeded an $r^2 = 0.04$ with demographics and were, therefore, not considered in the subsequently conducted analyses. Means and standard deviations were about comparable but numerically lower (except for love of learning, social intelligence, and appreciation of beauty and excellence) compared to those given in the article describing the construction of the German VIA-IS (Ruch et al. 2010a, b); none of the differences exceeded half a standard deviation. The scores in the AVEM scales were slightly lower in the present sample than in the normative sample (Schaarschmidt and Fischer 2008); exceptions were *emotional distancing* and *striving for perfection*. The largest difference was found for *active coping*, for which the normative sample scored approximately two-thirds of a standard deviation higher than the present sample.

The relation of character to adaptive and maladaptive behavior at work

Correlations between the VIA-IS (ordered along the five broader strengths factors) and the AVEM scales were computed. Table 1 gives the correlation coefficients along with a median of the correlations and the squared multiple correlation coefficients of all strengths with each of the AVEM scales.

Table 1 shows that character strengths converged well with the contents covered in the AVEM. As expected, active coping, satisfaction with life and satisfaction with work, shared most variance with the VIA-IS scales altogether ($R^2 = 0.53$; $R^2 = 0.51$; $R^2 = 0.35$). Furthermore, character strengths correlated positively with positive indicators of work-related behavior and experience, and negatively with the scale that expresses negative commitment to work (i.e., resignative tendencies). Also, the pattern of correlations suggested that some strengths were of higher relevance in the work context than others.

Most correlations were found for the emotional strengths (bravery, zest, love, social intelligence, hope, and humor; *median* $|r| = 0.21$), the strengths of restraint (perspective,

Table 1 Correlations between character strengths and the work-related behavior and experience scales

VIA-IS	AVEM										
	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11
Emotional strengths											
Bravery	0.06	**0.27**	0.09	−0.04	0.10	**−0.35**	**0.50**	**0.20**	**0.33**	**0.29**	**0.15**
Zest	**0.18**	**0.34**	0.07	0.02	0.14	**−0.37**	**0.58**	**0.23**	**0.42**	**0.55**	**0.24**
Love	−0.11	0.10	−0.03	−0.04	0.14	**−0.26**	**0.31**	**0.19**	**0.32**	**0.47**	**0.51**
Social intelligence	0.01	**0.17**	−0.02	0.03	0.14	**−0.18**	**0.31**	**0.21**	**0.30**	**0.31**	**0.23**
Hope	0.06	**0.28**	−0.03	−0.02	**0.21**	**−0.44**	**0.62**	**0.36**	**0.46**	**0.64**	**0.28**
Humor	−0.06	0.11	−0.08	−0.12	**0.17**	**−0.27**	**0.32**	**0.24**	**0.21**	**0.33**	**0.15**
Interpersonal strengths											
Kindness	0.05	0.13	0.14	**0.20**	0.00	−0.07	**0.25**	0.10	**0.17**	0.14	0.13
Teamwork	0.12	0.10	0.09	0.12	0.01	−0.14	**0.22**	**0.17**	**0.20**	**0.23**	**0.20**
Fairness	0.05	−0.01	0.09	0.13	0.01	−0.09	**0.19**	0.16	0.07	0.08	0.07
Leadership	0.14	**0.24**	**0.15**	0.06	−0.02	**−0.18**	**0.32**	**0.18**	**0.27**	**0.22**	**0.15**
Forgiveness	−0.01	−0.05	−0.02	−0.07	0.12	**−0.26**	**0.21**	**0.25**	**0.17**	**0.25**	0.11
Modesty	0.04	**−0.19**	0.07	**0.15**	−0.06	0.08	−0.07	0.12	−0.14	−0.09	−0.06
Strengths of restraint											
Perspective	0.06	**0.26**	0.01	0.05	0.11	**−0.25**	**0.38**	**0.31**	**0.33**	**0.31**	**0.19**
Persistence	**0.25**	**0.45**	**0.29**	**0.30**	−0.06	**−0.25**	**0.53**	0.14	**0.42**	**0.29**	0.14
Honesty	0.11	0.14	0.11	**0.24**	0.01	−0.08	**0.29**	**0.15**	**0.18**	0.11	0.10
Prudence	0.12	**0.15**	0.09	**0.29**	−0.03	−0.07	**0.21**	**0.20**	**0.19**	**0.15**	0.11
Self-regulation	0.13	**0.15**	0.07	**0.18**	0.03	**−0.19**	**0.28**	**0.20**	**0.24**	**0.19**	0.10
Intellectual strengths											
Creativity	0.09	**0.29**	0.14	0.00	−0.01	**−0.21**	**0.36**	0.13	**0.20**	**0.21**	0.03
Curiosity	0.07	**0.25**	0.12	−0.01	0.05	**−0.30**	**0.44**	**0.20**	**0.35**	**0.44**	**0.16**
Open-mindedness	0.08	**0.24**	**0.16**	**0.22**	−0.02	−0.08	**0.30**	**0.20**	**0.23**	**0.15**	0.08
Love of learning	0.11	**0.33**	0.11	−0.01	−0.02	**−0.17**	**0.34**	**0.15**	**0.21**	**0.24**	0.09
Theological strengths											
Beauty	0.00	0.09	0.09	0.07	−0.02	0.03	0.13	0.02	0.03	0.11	0.03
Gratitude	0.01	**0.15**	0.02	0.06	0.10	−0.14	**0.34**	0.12	**0.28**	**0.44**	**0.22**
Religiousness	−0.01	0.07	−0.04	−0.10	0.10	**−0.17**	**0.24**	**0.19**	**0.18**	**0.29**	0.09
Median |*r*| strengths	0.06	0.16	0.09	0.07	0.05	0.18	0.31	0.19	0.22	0.24	0.13
VIA-IS total R^2	**0.17**	**0.34**	**0.22**	**0.28**	**0.14**	**0.32**	**0.51**	**0.24**	**0.35**	**0.53**	**0.30**

N 887; *Beauty* Appreciation of beauty and excellence; *S1* subjective significance of work; *S2* career ambition; *S3* commitment; *S4* striving for perfection; *S5* emotional distancing; *S6* resignative tendencies; *S7* active coping; *S8* balance and mental stability; *S9* satisfaction with work; *S10* satisfaction with life; *S11* experience of social support

All correlations ≥0.13 were significant at $p < 0.05$ and those ≥0.15 at $p < 0.01$ (printed in boldface)

persistence, honesty, prudency, and self-regulation; *median* $|r| = 0.18$), and intellectual strengths (creativity, curiosity, open-mindedness, and love of learning; *median* $|r| = 0.16$). Thus, the AVEM scales demonstrated robust and sensible relations with almost all of these strengths. The interpersonal strengths (kindness, teamwork, fairness, leadership, forgiveness, and modesty; *median* $|r| = 0.13$) and the theological strengths (appreciation of beauty and excellence, gratitude, and religiousness; *median* $|r| = 0.10$) were not as clearly represented as the other strength factors.

Nevertheless, single strengths belonging to the interpersonal or theological strengths yielded robust relations to the AVEM scales (e.g., leadership, teamwork, gratitude). When computing the median of the correlation coefficients for each strength with all scales of the AVEM, highest coefficients were found for persistence (*median* $|r| = 0.29$), hope (*median* $|r| = 0.28$), zest (*median* $|r| = 0.24$), perspective (*median* $|r| = 0.23$), and curiosity (*median* $|r| = 0.20$).

As expected, correlations with the life satisfaction scale of the AVEM demonstrated a good replication of earlier findings, with correlation coefficients numerically highest for hope, zest, love, curiosity, and gratitude (all between $r^2 = 0.19$ and 0.41). Hope and zest were the strengths that showed the strongest relation to work satisfaction, along

with persistence ($r^2 = 0.18$ to 0.21). Hope and zest yielded also strong (positive) relations to active coping (around $r^2 = 0.36$) and were negatively related to resignative tendencies (around $r^2 = 0.16$). Finally, the strength of love demonstrated substantial correlations with the experience of social support.

Types of working behavior/experience and character

The AVEM allows for the computation of the similarity of each participant's profile with a prototypical profile of four types of work-related behavior and experience patterns. The authors of the AVEM suggest that a threshold of convergence above 95% indicates a complete assignment to one of the types.[1] Those participants that could be assigned to one of the types at the 95% threshold (i.e., $N = 216$; healthy-ambitious: $n = 23$; unambitious: $n = 68$; excessively ambitious: $n = 20$; resigned: $n = 105$) were used in a MANOVA with the four types as the independent variables and the 24 character strengths as the dependent variables. Pillai's trace indicated a significant effect of work-related behavior and experience type on character strengths ($F[72, 573] = 5.01$, $p < 0.001$, $\eta^2 = 0.39$). Subsequently, twenty-four ANOVAs (four groups) with each of the twenty-four VIA-scales as dependent variables were conducted. Twenty-one out of the twenty-four comparisons yielded significant mean-level differences (exceptions were fairness, modesty, and beauty; all *n.s.*); see Table 2. For the twenty-one significant comparisons, post hoc tests (Tukey's HSD) were performed.

Table 2 shows that those assigned to the healthy-ambitious type scored higher than the resigned types in all twenty-one strengths with significant differences. Nine out of the twenty-one comparisons with the risk pattern A were also significant. Thus, the two negatively connoted types could be well distinguished from the healthy-ambitious one on the basis of the character strengths. As expected, the healthy-ambitious type yielded highest expressions in most of the character strengths. It can also be differentiated well from the (potentially healthy but) unambitious type. Fourteen out of twenty-one comparisons yielded significant differences between the two (all intellectual strengths, and all strengths of restraint were among them). Largest mean-level differences (in terms of effect sizes) between the two healthy types were found for persistence, hope, zest, and perspective.

The unambitious type could also be well distinguished from the resigned type, with seventeen out of twenty-one comparisons yielding a significant difference (all in favor of the unambitious type). Resigned types scored lower than the unambitious type in all emotional strengths. In contrast, only four comparisons with the excessively ambitious type were significantly different. As expected, the risk pattern A participants were higher in persistence, but lower in love, forgiveness, and humor.

Furthermore, the two negative types of work-related behavior and experience differed from each other in thirteen out of the twenty-one strengths for which post hoc comparisons were conducted. In all cases, those assigned to the risk pattern A scored higher. This was found for all strengths of restraint, and for most emotional and intellectual strengths.

Discussion

The present study reveals that work-related behaviors are robustly related with morally positively valued traits (i.e., strengths of character). Instead of testing strengths one-dimensionally (in the sense of overall virtuousness or testing single strengths), we employed an approach accounting for the plural nature of the "good character." Different types of work-related behavior and experience patterns as covered in the AVEM, come with different profiles in the character strengths of the VIA-IS: Twenty-one out of twenty-four character strengths yielded significant mean-level differences among the four AVEM types. The VIA-IS can be structured along five broader strengths factors (i.e., emotional, intellectual, interpersonal, theological strengths, and strengths of restraint), and all of them differentiated among different work-related behaviors. Thus, character seemed to play a role and matter in work-related behavior.

All types could be distinguished well from each other on the basis of the character strengths. The exception was the comparison between the unambitious and the excessively ambitious types, where only four strengths were different. Thus, while burnout type of behavior is well reflected in the strengths profile, the over-ambitious "workaholic"-type can be less well identified from character strengths. Overall, character strengths are capable of distinguishing putatively healthy work-related behaviors and experiences (healthy-ambitious, unambitious) from burnout-type work behavior and experience (resigned). This study provides ground for the notion that specific strengths or broader strengths factors may be of comparatively greater interest in the work context or for the prediction of different aspects of work-type behavior. Largest mean-level differences (in terms of

[1] The authors of the AVEM also suggest a lower threshold of 80% for a "pronounced" assignment to one of the types, which would allow for the assignment of $N = 487$ participants (G: $n = 61$; S: $n = 153$; A: $n = 59$; B: $n = 214$). At an even lower threshold of 50% (reflecting a tendency to one of the types), almost all participants could be assigned to one of the four types ($N = 830$; G: $n = 115$; S: $n = 247$; A: $n = 144$; B: $n = 324$). If the data were analyzed using any of these thresholds, the outcomes were highly similar indicating a stability of the findings even at lower levels of assignment.

Table 2 Means, SD, and one-way analyses of variance (ANOVA) for AVEM types on character strengths

	AVEM types								ANOVA		Post Hoc
	G		S		A		B				
	M	SD	*M*	SD	*M*	SD	*M*	SD	F (3, 212)	η^2	
Emotional strengths											
Bravery	4.01	0.40	3.58	0.45	3.48	0.40	3.01	0.56	34.54	0.33	G>SA>B*
Zest	4.31	0.32	3.50	0.49	3.42	0.61	2.99	0.48	52.27	0.43	G>SA>B
Love	4.22	0.54	3.97	0.41	3.60	0.44	3.49	0.48	24.85	0.26	GS>AB
Social Intelligence	4.16	0.35	3.83	0.39	3.72	0.45	3.41	0.51	22.62	0.24	G>SA>B
Hope	4.22	0.37	3.59	0.41	3.17	0.48	2.76	0.59	70.69	0.50	G>S>A>B
Humor	3.85	0.69	3.64	0.56	3.31	0.65	3.28	0.58	9.21	0.12	G>AB; S>B
Interpersonal strengths											
Kindness	4.09	0.38	3.71	0.45	3.80	0.44	3.62	0.37	8.60	0.11	G>SB
Teamwork	3.71	0.58	3.41	0.48	3.43	0.53	3.28	0.41	5.66	0.07	G>SB
Fairness	3.89	0.64	3.72	0.48	3.75	0.34	3.64	0.41	1.97	–	
Leadership	3.88	0.51	3.45	0.42	3.68	0.45	3.22	0.41	19.36	0.21	GSA>B; G>S
Forgiveness	3.64	0.59	3.63	0.49	3.30	0.41	3.21	0.45	13.04	0.16	GS>B; S>A
Modesty	2.99	0.49	3.00	0.48	3.12	0.53	3.15	0.50	1.74	–	
Strengths of restraint											
Perspective	3.98	0.37	3.50	0.37	3.45	0.47	3.04	0.51	33.72	0.32	G>SA>B
Persistence	4.08	0.41	3.15	0.50	3.86	0.51	2.83	0.57	47.71	0.40	GA>SB; S>B
Honesty	3.93	0.39	3.68	0.36	3.81	0.42	3.50	0.37	11.51	0.14	GSA>B; G>S
Prudence	3.66	0.59	3.18	0.44	3.36	0.60	3.05	0.43	11.85	0.14	GA>B; G>S
Self-regulation	3.59	0.53	3.15	0.48	3.20	0.56	2.86	0.50	15.06	0.18	GSA>B; G>S
Intellectual strengths											
Creativity	4.14	0.49	3.40	0.62	3.48	0.76	3.18	0.74	12.88	0.15	G>SAB
Curiosity	4.44	0.38	3.96	0.47	4.04	0.60	3.48	0.56	28.10	0.28	GSA>B; G>S
Open-mindedness	4.19	0.31	3.65	0.46	3.83	0.49	3.44	0.52	17.01	0.19	GSA>B; G>S
Love of learning	4.29	0.47	3.87	0.42	4.02	0.61	3.58	0.60	14.08	0.17	GSA>B; G>S
Theological strengths											
Beauty	3.73	0.35	3.60	0.48	3.74	0.61	3.56	0.49	1.26	–	
Gratitude	4.07	0.38	3.77	0.50	3.67	0.50	3.41	0.46	16.56	0.19	G>SAB; S>B
Religiousness	3.22	1.03	3.11	0.81	2.83	0.76	2.54	0.72	9.39	0.12	GS>B

For all ANOVAS, $p < 0.001$; except fairness, modesty, and beauty (*n.s.*)

Post hoc tests differ at $p < 0.05$ according to Tukey's HSD procedure

N 216; *Beauty* Appreciation of beauty and excellence; *G* healthy-ambitious; *S* unambitious; *Risk Pattern A* excessively ambitious; *Risk Pattern B* resigned

* Differences between the pattern G and all other patterns, and differences between the pattern B and all other patterns

effect sizes) between the four types were found for the emotional strengths, these could be of particular interest for further research.

At the moment, it can only be speculated about whether strength-based interventions could be potent in alleviating burnout-related symptoms. The finding that people belonging to the resigned type showed the comparatively lowest scores in most of the character strengths (especially those belonging to the emotional strengths, the intellectual strengths, and the strengths of restraint) supports the idea of the potential usefulness of strength-based interventions. It is expected that working in accordance to one's signature strengths (i.e., three to seven strengths that are indicative for a person) has a positive impact on health-related working behavior and experience (see also Warr 1999). This notion has already entered the coaching practice, for example, by suggesting to work with a "Workplace Strengths Action Plan" that should help the client to implement his/her signature strengths into daily work (Magyar-Moe 2009). Due to the fact that there are already interventions for most of the character strengths (Peterson and Seligman 2004), strength-based interventions could be a fruitful topic for future research in the work context. Of course, the present study does not allow causal inferences. Therefore, further studies are needed for empirically testing these proposed causal relations.

The life satisfaction scale of the AVEM allowed to replicate earlier findings on its relation to character strengths. Again, the strengths of hope, zest, and love yielded the numerically highest relations. Also, the importance of strengths like zest or persistence in the work context was substantiated in the present study (see Peterson et al. 2009).

For example, those participants who were assigned to the "healthiest" work type (type G) were highest in persistence (as were the excessively ambitious) and zest. An exaggerated expression of strengths, in general, however, may have negative consequences: Peterson (2006) describes a classification of disorders based on the absence, opposition, or exaggeration of strengths. According to this classification, the exaggeration of persistence would be *obsessiveness*. This could be seen as a good descriptor for the cardiovascular disease-prone type-A behavior. To the knowledge of the authors, there are no strength-based interventions on reducing an exaggerated strength. However, in this case, addressing obsessiveness or hyperactivity (the exaggeration of zest/vitality) could be beneficial.

Not surprisingly, the healthy-ambitious type and the unambitious types scored higher in religiousness than the resigned type, as well as they showed higher scores in love compared to both negatively connoted types. The present study has shown that love is strongly related to the experience of social support, which is reduced in both unhealthy types. It can therefore be hypothesized that high scores in the strength of love might increase the availability of social support but also relate to accomplishments in a leading role (Peterson and Park 2006). This, in turn, might reduce the possibility of burnout-experiences (as seen in the resigned type). However, follow-up studies are needed for causal inferences.

Moreover, strengths like hope, zest, and bravery seem to facilitate active coping. Higher career ambitions can well be predicted among those who seem to endorse the strengths of the virtues of wisdom and knowledge and courage. Pending further studies, this could be a hint to the role character strengths play in the recruitment process or in placement-decisions.

In the present study, participants were asked, which characters strengths they possessed (and to what extent). However, it would be relevant to also assess whether the strengths can actually be *applied* in the work context. Thus, the question concerning the impact of the *fit* between job characteristics and the individual's strengths profile emerges. Addressing this fit would provide further information on the role of character strengths in the work context and their relation to work-related behavior and experience (Harzer and Ruch, submitted for publication). It is expected that greater fit increases the probability of healthy and ambitious work-related behaviors and experiences. Overall, the study shows that character strengths matter in the work context. The findings also represent a possible starting point for further research on the potential contribution of interventions aiming at ameliorating work-related behaviors and experiences for the benefit of both the employee (e.g., increased work satisfaction) and the employer (e.g., reduced number of absent days).

Limitations of the present study

The results are based on a convenience sample as only women currently employed entered the study, who were, additionally, rather well educated (although controlling for education level did not yield relevant changes). While there are only minor gender differences in the VIA-IS (Ruch et al. 2010a, b), there are some differences in the AVEM: In the normative sample, women scored lower than men in "career ambition", "active coping", "balance and mental stability", and higher than men in "resignative tendencies". Additionally, "unhealthy" patterns, especially risk pattern B, were more frequent among women (Schaarschmidt and Fischer 2008). Furthermore, a recent study reported differences in the stress and coping processes between men and women (Watson et al. 2011). Therefore, the study should be replicated with a gender-balanced sample, as well as it should collect information on professional background, and compare different occupational types; hence, this was not assessed in the present study. All data are cross-sectional. Likewise, future studies should address the impact of strength-based interventions on burnout-experiences and should include standard methods for the assessment of burnout, and examine relations to other work-related factors (cf., Bonneterre et al. 2008). Furthermore, the present study had a rather large amount of participants classified as "resigned" types (49%). This might be due to the fact that most people that enlisted themselves on the Positive Psychology website were interested in a change in their lives or learning more about their talents and potentials. Albeit a replication of the findings in a more balanced sample is desirable, the obtained differences between the types yielded large effect sizes, and it is assumed that the results are indicative for more diverse samples as well.

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